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3 (b): Sustainable cities, human mobility and international migration

Statement submitted by Diplomatic Council e.V., a non-governmental organization in special consultative status with the Economic and Social Council[2]

The Secretary-General has received the following statement, which is being circulated in accordance with paragraphs 36 and 37 of Economic and Social Council resolution 1996/31.

[1] E/CN.9/2018/1.
[2] The present statement is issued without formal editing.

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Statement

A sustainable city is built on a smart city — Public private partnerships represent the best sustainable city solutions

For the first time in the history of mankind, 2008 marked the year when more people lived in urban areas than in rural areas. According to estimates, over 60 per cent of the world population will be living in cities in 2030 rising to 66 per cent in 2050. This concentration of people is expected to occur in Africa, Asia and Latin America, however, the strongest growth is predicted in the poorer countries. Future scenarios suggest that the growth in the urban areas in the first three decades of the 21st century will exceed the cumulative urban expansion in the history of mankind.

At present, already 70 per cent of the world's energy consumption takes place in metropolitan areas although these only make up 5 per cent of the planet's landmasses. This development in turn triggers growing urban demand for water, land, construction material, food products combined with the need for pollution reduction measures and waste management. The municipalities are under constant pressure to deliver better service, enhance efficiency, reduce expenses, raise effectiveness and productivity as well as to counteract congestions and environmental pollution. Meeting these challenges require a concept for a sustainable city, which is closely linked with a concept of a smart city.

No sustainability without technology

A smart and sustainable city is innovative and takes advantage of information and telecommunication technologies to improve the quality of life, the efficiency of the municipal undertakings and services. Also, competition needs to be increased to meet the requirements of current and future generations regarding economic and social issues and environmental impacts. Consequently, the terms sustainable cities and smart cities do not only describe a technological vision but rather represent a municipal multi stakeholder concept that needs to be tackled by leveraging synergies between politics, society, economy and technology. As a result, local politics will become more challenging than ever before. If more than half of the world population will reside in cities, local politics will be the decisive factor in creating smart and sustainable cities and enhancing the quality of life for most people.

Smart and sustainable cities depend on smart and intelligent infrastructure considering regions, premises, mobility, energy, water, supplies, disposal, healthcare and digital infrastructure. This concept assumes five interlocking digital levels: a broadly distributed net of sensors, a connectivity for collecting data, a data analysis with prediction functionality, an automation level as well as a city network that links all physical and digital infrastructure. A successful implementation would require a fail-safe broadband net, an efficient ecosystem for the "internet of things" and the real-time analysis of the data collected according to Big Data.

Integrating Infrastructures

Today, a city already consists of different vertical infrastructures which, have worked disconnected until now more or less. The challenge of a sustainable city lies in connecting these separate systems to one complete system. A key element of a sustainable city is to link all systems and merge functional units (co-locations).

Building a digital ecosystem based on municipal data thus would be the first step towards the creation of a smart and sustainable city. Such a digital ecosystem opens the opportunity for the public and private sector to collaborate in accordance

with specific rules to streamline the various services and provide them to the population.

The aim should be to develop public-private financing models (public-private partnerships) using units of accounts and data access hence offering an economic basis and perspective for a sustainable city.

The implementation and operation of sustainable cities will only succeed if local politics clearly point out the attractive business models to the business sector encouraging commitment for the urban future concepts. In this process, the large-scale collection and evaluation of big data will surely play a key role for the success. Incidentally, the detailed data analysis is of highest interest, to both, the private and public sector serving as a basis for monetisation: municipal tax and levy models which take on "intelligent" management functions will become the regular case in the future thanks to big data analysis.

The simplest model — persons driving to the centre of the city during rush hours must pay an extra fee — can be complemented in several ways by granular versions. Ultimately, all tax models can be applied to protect the environment and operate a sustainable city.

The implementation of a sustainable city requires a well-thought-out combination of top-down and button-up approach. Especially for emergency cases, it is imperative to control the connected municipal infrastructure top-down. At the same time, it is important to integrate initiatives from the population and the local economy in a transparent and sustainable way into the overall concept.

Public Private Partnerships

Sustainable cities can only be built and developed with the joint support of public-private partnerships, which are key to satisfy the enormous demand for infrastructure worldwide. The demand is coming from numerous sectors including transport, telecommunications, energy and water as well as education and healthcare — all of them of utmost importance for a sustainable city.

Whereas the demand for infrastructure has massively grown worldwide, the supply has slowed down due to numerous factors, such as high public debt and the lack of knowledge leading to a global infrastructure investment gap of around one trillion US dollars annually until 2030. Yet, not only the financing difficulties impede this progress, the contracting authorities are increasingly lacking know-how and expertise. According to UNESCO estimates there is a shortage of 2.5 million technicians in sub-Saharan Africa while at the same time the number of students in the field of engineering has decreased significantly in formerly leading industrial countries.

For several reasons, there is a significant infrastructural backlog demand that cannot be closed and which hinders the advancement of urban areas causing far-reaching consequences for the local population affecting global understanding and peace.

These challenges cannot be addressed without involving and integrating the private sector. In this context, a public-private partnership represents a potential and proven model to reconcile the backlog demand in the infrastructure industry, particularly in respect to urbanization focusing on national priorities, resources and capacities. It is equally important to use the know-how of the private sector for public purposes, gain funding for public tasks and create a win-win situation for all involved.

In a public-private partnership, the public and private clients agree on the partial or full performance of a previously public task stipulating objectives, scope, quality, duration, prices and risk-sharing for the duration of the contract for the lifecycle of

the investment or service. Payment is made depending on the level and quality of the performance of the individual contractual components.

The public client defines the project aims while the private partner assumes accountability for the fulfilment thereof. In a public-private partnership the public sector, however, retains ownership over the infrastructure as opposed to privatization.

A successful public-private partnership offers the public client a clear improvement of services, sustainable efficiency enhancements, a mobilization and involvement of private capital. Public-private partnerships are not the solution to all problems and challenges, yet they represent a good and feasible way to build sustainable municipal infrastructure for implementing a smart and sustainable city.